

Weekly Report

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Misc.

- **Slides for AI 2.0 Workshop** Probably done.
- **Preparations for the Summer Visualization School Course** For preparing the slides, I read the related chapters on high-dimensional visualization in Tamara's *Visualization Analysis & Design* and our textbook. In the next week I will begin preparing the slides and finish it before 24th.
- **3-D Scatterplot View in Readpeer** Liu Qi has sent me the dataset and described requirements. I tried plotting the data points with three.js however I found that there are several JavaScript libraries that have implemented the basic 3-D plotting feature like plot.ly. I will try to migrate the code to the library and see if we can save time on the implementation.

Projects

Visual SVM Project

- **Data** The USPS hand-written digit dataset is able to be loaded in the system. As the dataset contains 10 classes (number 0 to 9) and the system is for binary classification, I extracted several class pairs and filtered out their related test data. Currently I am working on the classes of hand-written "7" and "9" because these two numbers are relatively easy to be mis-classified.
- **Analysis Pipeline** After thinking about how to write the paper, I figured out several points for organizing the entire paper:
Visual Classification Assisted by SVM in a Semi-lazy Style
 - Main goal: how to classify unlabeled data instances (query) with visual analysis tools
 - Task 1: Visualize the boundaries between classes
 - Task 2: Create local models built upon the query and its neighbors
 - Task 3: Enhance user's understanding by generating a global picture based on the existing local models

Plan for the Next Week

- Write down the contributions, analytical tasks and design goals;
- Start organizing the slides;
- Help Liu Qi with the scatter-plot issue.